LISTING OF CLAIMS

1. (currently amended): A process of coating the surface of a substrate with catalytic components to form a catalyst, ~~where~~ wherein the catalyst is a catalyst matrix having two or more catalytic components which are layered successively on the substrate, comprising the following sequence of steps:

(a) infusing the substrate with more than an adequate amount of solution having a starting material comprising a catalytic component precursor, ~~where~~ wherein the thermal decomposition product of the catalytic component precursor is a catalytic component and ~~where~~ wherein an adequate amount of solution is an amount that thoroughly coats the substrate;

(b) removing from the substrate any solution in excess of an adequate amount, thereby leaving a coating of the catalytic component precursor on the surface of the substrate;

(c) heating the coated substrate thereby converting the coating of the catalytic component precursor to the catalytic component by thermal decomposition, the catalytic component being a first catalytic component;

(d) etching the coated substrate[[,]] ;

(e) repeating steps (a) - (c) for a second catalytic component.

2. (currently amended): The process of claim 1, wherein the sequence of (a), (b), and (c) is repeated in order to successively layer ~~more than two~~ at least a third catalytic ~~components~~ component on the substrate.

3. (original): The process of claim 1, wherein the substrate is a substrate selected from the group consisting of ceramics, glass, metals, and fabrics.

4. (original): The process of claim 3, wherein the substrate is a ceramic substrate selected from the group consisting of beads, pellets, and monoliths.

5. (original): The process of claim 4, wherein the ceramic substrate is a monolith.

6. (currently amended): The process of claim 1, wherein [[a]] the first catalytic component is a metal oxide.

7. (original): The process of claim 6, wherein the first catalytic component is a metal oxide selected from the group consisting of manganese oxide and tin oxide.

8. (original): The process of claim 7, wherein the first catalytic component is tin oxide.

9. (currently amended): The process of claim 1, wherein [[a]] the second catalytic component is a noble metal.

10. (original): The process of claim 9, wherein the second catalytic component is a noble metal selected from the group consisting of platinum and palladium.

11. (original): The process of claim 10, wherein the second catalytic component is platinum.

12. (currently amended): The process of claim 2, wherein [[a]] the third catalytic component is a metal oxide and this metal oxide is used as a promoter, ~~where~~ and wherein the promoter is a catalytic component which increases the activity or catalyzing rate of the catalyst.

13. (original): The process of claim 12, wherein the third catalytic component is a metal oxide selected from the group consisting of the oxides of manganese and iron.

14. (original): The process of claim 13, wherein the third catalytic component is iron oxide.

15. (original): The process of claim 2, wherein the catalyst has three catalytic components.

16. (original): The process of claim 15, wherein the three catalytic components are a first metal oxide, a second metal oxide, and a noble metal.

17. (original): The process of claim 16, wherein the first metal oxide is tin oxide, the second metal oxide is iron oxide, and the noble metal is platinum.

18. (original): The process of claim 1, wherein the substrate, now coated with one or more catalytic components, is heated in an atmosphere containing a reducing gas.

19. (original): The process of claim 18, wherein the reducing gas is either carbon monoxide or hydrogen.

20. (original): The process of claim 1, wherein step (a) is modified so that the substrate is infused with an excess of the solution by vacuum deaeration.

21. (original): The process of claim 1, wherein step (b) is modified so that the excess of the solution is removed by draining away and/or evaporating off the excess of the solution.

22. (original): The process of claim 1, wherein step (c) is modified so that the heating of the coated substrate is to approximately 300 degrees Celsius.

23. (previously amended): The process of claim 1, wherein the catalyst formed by said process is used for the oxidation of carbon monoxide.

24. (previously amended): The process of claim 1, wherein the catalyst formed by said process is used for the oxidation of volatile organic compounds.

25. (new): The process of claim 2, wherein the sequence of steps (a), (b) and (c) is repeated for one or more of the catalytic components, if required to achieve a desired level of loading.

26. (new): A process for coating the surface of a substrate with catalytic components to form a catalyst, wherein the catalyst comprises at least two catalytic components which are layered successively on the substrate, including the steps of:

(a) infusing the substrate with more than an adequate amount of solution having a starting material comprising a catalytic component precursor, wherein an adequate amount of solution is an amount that thoroughly coats the substrate;

(b) removing from the substrate any solution in excess of an adequate amount, thereby leaving a coating of the catalytic component precursor on the surface of the substrate;

(c) converting the coating of the catalytic component precursor to a first catalytic component;

(d) etching the coated substrate; and

(e) repeating steps (a) - (c) to produce a second catalytic component.

27. (new): The process of claim 26, comprising the a step of:

repeating steps (a), (b), and (c) in order to successively layer at least a third catalytic component on the substrate.

28. (new): The process of claim 27 wherein said step of repeating steps (a), (b), and (c) in order to successively layer at least a third catalytic component on the substrate is performed prior to said step (d) and (e).

29. (new): The process of claim 26, wherein the substrate is a substrate selected from the group consisting of ceramics, glass, metals, and fabrics.

30. (new): The process of claim 29, wherein the substrate is a ceramic substrate selected from the group consisting of beads, pellets, and monoliths.

31. (new): The process of claim 30, wherein the ceramic substrate is a monolith.

32. (new): The process of claim 26, wherein the first catalytic component is a metal oxide.

33. (new): The process of claim32, wherein the first catalytic component is a metal oxide selected from the group consisting of manganese oxide and tin oxide.

34. (new): The process of claim 33, wherein the first catalytic component is tin oxide.

35. (new): The process of claim 26, wherein the second catalytic component is a noble metal.

36. (new): The process of claim 35, wherein the second catalytic component is a noble metal selected from the group consisting of platinum and palladium.

37. (new): The process of claim 36, wherein the second catalytic component is platinum.

38. (new): The process of claim 28, wherein the third catalytic component is a metal oxide and this metal oxide is used as a promoter, and wherein the promoter is a catalytic component which increases the activity or catalyzing rate of the catalyst.

39. (new): The process of claim 38, wherein the third catalytic component is a metal oxide selected from the group consisting of the oxides of manganese and iron.

40. (new): The process of claim 38, wherein the third catalytic component is iron oxide.

41. (new): The process of claim 28, wherein the three catalytic components are a first metal oxide, a second metal oxide, and a noble metal.

42. (new): The process of claim 41, wherein the first metal oxide is tin oxide, the second metal oxide is iron oxide, and the noble metal is platinum.

43. (new): The process of claim 26, wherein the substrate, now coated with one or more catalytic components, is heated in an atmosphere containing a reducing gas.

44. (new): The process of claim 43, wherein the reducing gas is either carbon monoxide or hydrogen.

45. (new): The process of claim 26, wherein step (a) is modified so that the substrate is infused with an excess of the solution by vacuum deaeration.

46. (new): The process of claim 26, wherein step (b) is modified so that the excess of the solution is removed by draining away and/or evaporating off the excess of the solution.

47. (new): The process of claim 26, wherein step (c) is modified so that the heating of the coated substrate is to approximately 300 degrees Celsius.

48. (new): The process of claim 28, wherein at least the steps of (a), (b) and (c) are repeated for one or more of the catalytic components, if required to achieve a desired level of loading.

49. (new): The process of claim 26 wherein said step of converting the coating of the catalytic component precursor to a first catalytic component comprises the step of heating the coated substrate thereby converting the coating of the catalytic component precursor to the catalytic component by thermal decomposition.

50. (new): The process of claim 26, wherein the catalyst formed by said process is used for the oxidation of carbon monoxide.

51. (new): The process of claim 26, wherein the catalyst formed by said process is used for the oxidation of volatile organic compounds.